REMARKS

Claims 1-29 are pending in this application. Claims 1, 15 and 29 have been amended. No new matter has been added, and the amended claims are fully supported by the specification.

Claims rejection – Indefiniteness

Claims 1-29 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First, the Office Action stated that it was unclear "why it is claimed that a connection between two end users can be maintained 'without terminating the connection at the inbound edge of the computer network,' since there must be a connection at the inbound edge of the computer network in order to maintain a connection."

To address this concern, the phrase "*preserves a connection* from the first computer to the second computer without terminating *the connection* at the inbound edge of the computer network" in the independent claims (claims 1, 15 and 29) has been replaced with "*transmits data* from the first computer to the second computer without terminating *a connection from the first computer to the second computer at a switch* at an inbound edge of the computer network." (Emphasis added.)

Second, the Office Action stated it was "also unclear what is meant by 'inbound edge of the computer network' and where this is located." As discussed in the specification, the "inbound edge of the computer network" refers to the edge switch at the border of a computer network at the point where a data packet enters the network. The specification provides numerous statements which address this issue, such as the following:

"[T]he present invention relates to providing data transmission connections end-to-end across an internet service provider computer network." Para. [0001]

"the need to connect ports of a same Etherchannel between different *edge switches* of the ISP network to increase availability. Such functionality would allow emulation of point-to-point connection of Etherchannel ports through an ISP network without dedicated lines, thus maximizing network usage." Para. [0002](emphasis added)

"Each tag is preserved when the frame enters the *edge switches* in the ISP cloud." Para. [0005](emphasis added)

"L2PT allows *switches on the inbound side of the ISP infrastructure* to encapsulate protocol packets with a special MAC address and send them across the ISP infrastructure." Para. [0007](emphasis added)

"When Layer 2 protocol packets *enter the tunnel port on the inbound switch*, the destination MAC address of the L2 protocol packet is replaced with tunnel MAC (0100.0ccd,cdd0) and forwarded to all trunk ports." Para. [0008](emphasis added)

Given the specification's references to edge switch and the inbound point at which a packet enters a computer network, it is respectfully submitted that the language in the claims referring to "inbound edge of the computer network" was already clear in the claims as previously presented. However, in order to expedite prosecution of this matter, the claims have been amended to further clarify this aspect of the invention. For example, claim 1 has been amended to recite, "a switch at [[the]] an inbound edge of the computer network." The other independent claims have been amended in a similar fashion.

Claims rejection – 102(b) Anticipation

Claims 1, 6-8, 12-15, 20-22 and 26-29 are rejected by the Examiner as allegedly being anticipated by U.S. Patent No. 6,501,749, which issued to Alexander Jr. et al. ("Alexander"). These rejections are respectfully traversed.

Claims 1, 15 and 29 of the invention recite "creating a link aggregation comprising a plurality of tunnels across a computer network to connect a first computer to a second computer, the plurality of tunnels including a tunnel for each link in the link aggregation, said link aggregation capable of simultaneously supporting a plurality of transmission protocols." Alexander does not show or suggest at least this feature of the invention.

According to the Office Action, Alexander provides for a method of transmission across a computer network, and specifically provides for "a plurality of tunnels across a computer network to connect a first computer to a second computer." However, Alexander nowhere contains any reference to "tunnels", or to the use of tunnels to provide for data transmission across a computer network. Furthermore, Alexander does not provide for a "computer network" across which data would pass in going from a first computer to a second computer, which is the context of all pending claims. That tunnels and computer networks are missing

from Alexander is not surprising since Alexander is directed to a method for handling distribution of multi-destination traffic through--that is, within--a single host or switch.

With respect to the element concerning "tunnels", the Office Action suggests on page 3 that the plurality of tunnels in the invention correspond to "link aggregation 20" in Alexander. This correlation however does not succeed. Link aggregation is a means of using multiple Ethernet network cables/ports in parallel to increase the link speed beyond the limits of any one single cable or port, and to increase the redundancy for higher availability. Link aggregation does not have to do with data traffic crossing a computer network.

By contrast, tunneling is a technology that enables one network to send its data via another network's connections. Tunneling works by encapsulating a network protocol within packets carried by the second network. Accordingly, link aggregation and tunneling are fundamentally different concepts. Links in link aggregations may or may not be transmitted via tunnels. Indeed, tunnels are only required when data traffic is crossing another computer network to reach its final destination. In the context of Alexander, which shows no intermediate computer network, it seems clear that no tunneling could be referenced. Accordingly, the link aggregation in Alexander cannot read on the "tunnels" recited in the pending claims.

As noted above, to require tunneling in a network, one would need to have a method or system where data traffic necessarily went across an intermediate computer network in going from one computer to a second computer. However, with respect to "computer network", the Office Action provides no correlating element in Alexander. Accordingly, Applicants respectfully request that the Examiner clarify what aspect of Alexander corresponds to the computer network in the present invention, if the Examiner were to continue to pursue this reference. Alexander refers to a "network" in certain figures and claims wherein the term "network" is used to reference the entire method or system claimed. (*See* element 18 of Alexander's Figure 1, Col. 3, lns. 37-43, 60-65, and claim 14 at Col. 6, ln 49 to Col. 7, ln 6). Alexander's use of the term "network" differs both from how one of skill in the art would understand the term "computer network" and how the term is used in the pending claims.

Furthermore, Alexander actually teaches away from the present invention. In Alexander, the claimed inventive ideas concern activity occurring within one network node: Alexander concerns activity between the ingress and egress ports of one node. In Alexander, data arriving into one port in a data processing node is forwarded to each of a plurality of egress ports within a

link aggregation group; an algorithm is then run in each of these egress ports to determine whether the egress port in question should further transmit or drop the data; then data is dropped or forwarded depending on the outcome of the distribution algorithm. Col. 2, ln 30-64. Accordingly, in Alexander, there is one set of incoming data, not multiple data sets. Moreover, not all the links in Alexander's link aggregation group forward the data. By contrast, the pending claims recite data in <u>each</u> link being forwarded.

For at least these reasons, Claims 1, 15 and 29 should be allowable. Claims 6-8 and 12-14 are dependent on claim 1, and claims 20-22 and 26-28 are dependent on claim 15, and should be allowable for at least similar reasons.

Claims rejection – 103(a) Obviousness

Claims 2 and 16 were rejected under 35 U.S.C §103(a) as allegedly being unpatentable over Alexander in view of U.S. Patent No. 6,910,149, Perloff et al. ("Perloff"). Claims 3, 4 17 and 18 were rejected under 35 U.S.C §103(a) as allegedly being unpatentable over Alexander in view of U.S. Patent No. 7,061,875, Portolani et al. ("Portolani"). Claims 5 and 19 were rejected under 35 U.S.C §103(a) as allegedly being unpatentable over Alexander in view of U.S. Publication No. 2006/0067317, Engstrand et al. ("Engstrand"). Claims 9-11 and 23-25 were rejected under 35 U.S.C §103(a) as allegedly being unpatentable over Alexander in view of U.S. Patent No. 5,081,621, Sugimoto et al. ("Sugimoto"). These rejections are respectfully traversed.

As discussed above, Alexander addresses a fundamentally different technology than that recited in the pending claims. Alexander does not teach, disclose or suggest fundamental attributes of the present invention, such as tunneling across a computer network. Therefore, for at least these reasons, claims 2-5, 9-11, 16-19 and 23-25 should be allowable.

CONCLUSION

For at least the above reasons, Applicants believe all claims now pending in this application are in condition for allowance. Applicants therefore respectfully request that a timely Notice of Allowance be issued in this case. Should the Examiner believe a telephone conference would expedite prosecution of this application, please contact the undersigned at the telephone number set forth below.

The Commissioner is hereby authorized to charge any additional fees, including any extension fees, which may be required or credit any overpayment directly to the account of the undersigned, No. 50-4480 (Order No.CISCP586).

Respectfully submitted,
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